

Date: Thursday, 11/16/2006 4:22:34 PM  
User: Kim Johnston

# Process Sheet

|  |  |
|--|--|
| <b>Customer</b> : CU-DAR001 Dart Helicopters Services          | <b>Drawing Name</b> : SKIDTUBE ASSEMBLY                    |
| <b>Job Number</b> : 29473                                      |  |
| <b>Estimate Number</b> : 10022                                 |  |
| <b>P.O. Number</b> : N/A                                       | <b>Part Number</b> : D205634011                            |
| <b>This Issue</b> : 11/16/2006 <b>S.O. No.</b> : N/A           | <b>Drawing Number</b> : N/A                                |
| <b>Prsht Rev.</b> : NC   | <b>Project Number</b> : N/A                                |
| <b>First Issue</b> : N/A <b>Type</b> : LANDING GEAR            | <b>Drawing Revision</b> : N/A                              |
| <b>Previous Run</b> : 29471                                    | <b>Material</b> : N/A                                      |
| <b>Written By</b> : <i>[Signature]</i>                         | <b>Due Date</b> : 12/10/2006 <b>Qty:</b> 1 <b>Um:</b> Each |
| <b>Checked &amp; Approved By</b> : <i>[Signature]</i>          |  |
| <b>Comment</b> : Est Rev:P 02.08.28 Removed QC5 from Step 5 KJ |  |

## Additional Product

Job Number:



|                |                              |                      |
|----------------|------------------------------|----------------------|
| <b>Seq. #:</b> | <b>Machine Or Operation:</b> | <b>Description :</b> |
|----------------|------------------------------|----------------------|

|     |    |                  |
|-----|----|------------------|
| 1.0 | DC | DOCUMENT CONTROL |
|-----|----|------------------|



**Comment:** DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D205-634-011 CHG004

*KT 06.11.20* ①

|     |        |                    |
|-----|--------|--------------------|
| 2.0 | 29473A | SKID TUBE ASSEMBLY |
|-----|--------|--------------------|



**Comment:** Sub-Component SKID TUBE ASSEMBLY

D205-634-041 B *29473A*

|     |             |                       |
|-----|-------------|-----------------------|
| 3.0 | PACKAGING 1 | PACKAGING RESOURCE #1 |
|-----|-------------|-----------------------|



**Comment:** PACKAGING RESOURCE #1

Pick Packing Kit

|     |        |                         |
|-----|--------|-------------------------|
| 4.0 | K10003 | D205-634-011 Saddle Kit |
|-----|--------|-------------------------|



**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

|     |             |             |       |
|-----|-------------|-------------|-------|
| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|-------|

|   |        |            |               |
|---|--------|------------|---------------|
| 1 | K10003 | Saddle Kit | <i>B28474</i> |
|---|--------|------------|---------------|

|   |              |                        |                |
|---|--------------|------------------------|----------------|
| 1 | D205-634-041 | Skidtube Assembly(ref) | <i>B29473A</i> |
|---|--------------|------------------------|----------------|

*DU 6/12/13* ①

|     |     |                                    |
|-----|-----|------------------------------------|
| 5.0 | QC4 | INSPECT 100% KITS FOR COMPLETENESS |
|-----|-----|------------------------------------|



**Comment:** INSPECT 100% KITS FOR COMPLETENESS

*D506/12/13* ①

| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |  |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |  |
|      |      |                    |  |    |      |     |                                     |                          |  |
|      |      |                    |  |    |      |     |                                     |                          |  |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: LD Date: 06/12/13  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |                |  |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|----------------|--|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B      |  | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng | Sign &<br>Date |  |                           |                       |                          |
|      |      |                                  |                      |                                 |                |  |                           |                       |                          |
|      |      |                                  |                      |                                 |                |  |                           |                       |                          |
|      |      |                                  |                      |                                 |                |  |                           |                       |                          |

NOTE: Date & initial all entries

Date: Thursday, 11/16/2006 4:22:35 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKIDTUBE ASSEMBLY

Job Number: 29473

Part Number: D205634011

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-634-011

Location: DEVG

*06/12/13 (1)*

7.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*06/12/13 (1)*

Job Completion



*06/12/13*

| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |  |    |      |     |                                     |                          |
|      |      |                    |  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |           |                |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng |           | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |

**NOTE:** Date & initial all entries

Date: Thursday, 11/16/2006 4:23:00 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SKID TUBE ASSEMBLY  
 Job Number : 29473A  
 Estimate Number : 10023  
 P.O. Number : N/A Part Number : D205634041  
 This Issue : 11/16/2006 S.O. No. : N/A Drawing Number : D2580 REV C  
 Prsht Rev. : NC Project Number : N/A  
 First Issue : N/A Type : LANDING GEAR Drawing Revision : C  
 Previous Run : 29471A Material : N/A  
 Due Date : 12/10/2006 Qty: 1 Um: Each  
 Written By :  
 Checked & Approved By :  
 Comment : Est Rev: N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step  
 30 KJ  
 Est Rev. O 06.02.28 Added paperwork EC

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy D205-634 bluefile &amp; type labels per PPP D205-634 CHG001

2.0 D25001190 Ext'n -1" Beam Tube 4"



Comment: Qty.: 1.0400 Each(s)/Unit Total: 1.0400 Each(s)

Pick:

Qty Part Number Description Batch  
 1 D2500-1-190 Skid Tube Extrusion B25858 m.h 06/11/27 ①

3.0 D2596 205 Web



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch  
 1 D2596 205 Web B29604 m.h 06/11/28 ①

4.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

- 1- Inspect mat'l D2500-1-190 for damage JD 06/11/28
- 2-Cut D2500-1-190 per Dwg D2580 if necessary Deburr ends JD 06/11/28
- 3-Drill pilot holes using drill jig DT 8149 JD 06/11/28
- 4-Acid etch and Alodine tube per QSI 005 4.1 m.h 06/11/27 ①

| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |  |    |      |     |                                     |                          |
|      |      |                    |  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |           |                |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng |           | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |

NOTE: Date & initial all entries

Date: Thursday, 11/16/2006 4:23:00 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 29473A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5-Open holes to 0.500" as per Dwg D2580 without cutting fluid

6-Countersink holes as per Dwg D2580 without cutting fluid

7-Deburr and blow out all chips from inside of tube

8-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting

Pick:

Qty Part Number Description Batch

A/R Sikaflex-291 M1102660

Sikaflex expire date: 07-02-01

Start Time: 12:37pm Date: 06/11/28

Fin Time: 1:00pm Date: 6-11-29

M.H. 06/11/28 ①

5.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

DP 6-11-29

6.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Deburr ends after cutting. Remove alodine from around holes

BE 06-12-02  
R 06-11-30

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

BE 06-12-02

8.0

D25763

Step (Machining Detail)



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2576-3

Step

23060

BE 06-12-02

| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |  |    |      |     |                                     |                          |
|      |      |                    |  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |           |                |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng |           | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |

**NOTE:** Date & initial all entries



Date: Thursday, 11/16/2006 4:23:00 PM  
User: Kirp Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 29473A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description:

9.0

D2579

Crossbolt Spacer



Comment: Qty.: 20.0000 Each(s)/Unit Total: 20.0000 Each(s)

Pick:

Qty

Part Number

Description

Batch

20

D2579

Spacers

B 29489 BE 06-12-02

10.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Prepare tube for welding D2576-3 StepRemove alodine as required. BE 06-12-02

2-Weld step D2576 as per Dwg. D2580 and QSI 004

A/R

Aluminum Rod

m10/655

BE 06-12-02

3-Weld crossbolt spacers D2579 as per Dwg. D2580 and QSI 004. For D2579

spacers, weld one

side, pass 3/8" drill, weld other side, pass 3/8" drill

A/R

Aluminum Rod

m10/655

BE 06-12-02

4-Grind welds as per Dwg D2580 Grind flush ridge made from bending

Pm 06-12-4 ①

5-Drill holes for wearplates using DT 8217Open holes to 19/64", adjust stopper not to hit web. Debur

Pm 06-12-4 ①

6-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Debur holes

Pm 06-12-4 ①

7-Drill pilot holes for aft cap using DT 8215Open holes to #6 Drill bit. Debur

Pm 06-12-4 ①

8-Drill pilot holes for Tow ring using DT8091, open to .640"and Debur

Pm 06-12-4 ①

11.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

11/06/12/04 ①

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

11/06/12/04 ①

| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |  |    |      |     |                                     |                          |
|      |      |                    |  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |           |                |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng |           | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |

**NOTE:** Date & initial all entries

Date: Thursday, 11/16/2006 4:23:00 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 29473A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



M102 391



Comment: HAND FINISHING RESOURCE #1

Powder Coat White (Ref: 4.3.5.2) as per QSI 005 4.3

yl : FC

06/12/06 X1

14.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

a.m 06/12/06 X1

15.0

D25771

Wearplate Fwd



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch  |
|-----|-------------|-------------|--------|
| 1   | D2577-1     | Wearplate   | B28063 |

16.0

D25773

Wearplate Aft



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch  |
|-----|-------------|-------------|--------|
| 1   | D2577-3     | Wearplate   | B28013 |

17.0

D25775

Wearplate, Centre



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch  |
|-----|-------------|-------------|--------|
| 1   | D2577-5     | Wearplate   | B28122 |

18.0

ALS71032130

Insert



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

| Qty | Part Number   | Description | Batch  |
|-----|---------------|-------------|--------|
| 44  | ALS7-1032-130 | Inserts     | M18964 |

a.m 06/12/06 X1

| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |  |    |      |     |                                     |                          |
|      |      |                    |  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |           |                |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng |           | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |

**NOTE:** Date & initial all entries

Date: Thursday, 11/16/2006 4:23:00 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 29473A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

AN960JD10L

Washer



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch   |
|-----|-------------|-------------|---------|
| 44  | AN960JD10L  | Washer      | M108217 |

20.0

AN34A

Bolt



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

| Qty | Part Number | Description | Batch   |
|-----|-------------|-------------|---------|
| 44  | AN3-4A      | Bolt        | M101697 |

21.0

D25941

Plug



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

plug

Batch: B29621

22.0

D25943

O-Ring



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

o-ring

Batch: B27168

23.0

D2855

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cap

Batch: B26351

24.0

AN35A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

Batch: M15205

a.m

06/12/06

Q

| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |  |    |      |     |                                     |                          |
|      |      |                    |  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: ☒ Date: 26/12/13

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |           |                |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng |           | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |

NOTE: Date & initial all entries

Date: Thursday, 11/16/2006 4:23:01 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 29473A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

25.0

AN960JD10L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Washer

Batch: M102217

A.M

06/12/06

(1)

26.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install inserts & wearplates as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R Sikaflex-291 M102107

Sikaflex expire date: 02/07

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291 M102107

Sikaflex expire date: 02/07

A.M

06/12/06

(1)

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

FC M-H 06/12/07

Batch:

M102635

27.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

28.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-634-041

Location:

PPP Rev:

N/A

29.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

06/12/13

11 06/12/13

| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |  |    |      |     |                                     |                          |
|      |      |                    |  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |           |                |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|-----------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng |           | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |
|      |      |                                  |                      |                                 |           |                |                           |                       |                          |

**NOTE:** Date & initial all entries



| W/O: |      | WORK ORDER CHANGES |  |    |      |     |                                     |                          |
|------|------|--------------------|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   |  | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |  |    |      |     |                                     |                          |
|      |      |                    |  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                      |                                 |                |  |                           |                       |                          |
|------|------|----------------------------------|----------------------|---------------------------------|----------------|--|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action    |                                 | Section B      |  | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng | Action Description<br>Chief Eng | Sign &<br>Date |  |                           |                       |                          |
|      |      |                                  |                      |                                 |                |  |                           |                       |                          |
|      |      |                                  |                      |                                 |                |  |                           |                       |                          |
|      |      |                                  |                      |                                 |                |  |                           |                       |                          |

NOTE: Date & initial all entries



|                               |                                |   |                        |
|-------------------------------|--------------------------------|---|------------------------|
| DESIGN<br><i>[Signature]</i>  | DRAWN BY<br><i>[Signature]</i> | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                        |
| CHECKED<br><i>[Signature]</i> | APPROVED<br><i>[Signature]</i> | DRAWING NO.<br>D2580                              | REV. C<br>SHEET 1 OF 2 |
| DATE<br>98.08.26              |                                | TITLE<br>205 SKIDTUBE ASSEMBLY                    | SCALE<br>NTS           |
| A                             | 96.09.16                       | NEW ISSUE   |                        |
| B                             | 96.12.02                       | AS MANUFACTURED                                   |                        |
| C                             | 98.08.26                       | REDRAWN, INCLUDED DEO 9094/9097                   |                        |

RELEASED  
98/09/17 DS

| QTY | Part Number   | Description       |
|-----|---|-------------------|
| X   | D2580-041   | SKIDTUBE ASSEMBLY |
| *   | D2500-1   | EXTRUSION         |
| 1   | D2596   | 205 WEB           |
| 1   | D2575   | AFT CAP           |
| 1   | D2576 - 3   | STEP              |
| 20  | D2579   | CROSS BOLT SPACER |
| 16  | D2594-1   | PLUG              |
| 16  | D2594-3   | O-RING            |
| 1   | D2577-1   | WEARSHOE          |
| 1   | D2577-3   | WEARSHOE          |
| 1   | D2577-5   | WEARSHOE          |
| 44  | ALS7-1032-130<br>or AKS7-1032-130<br>or AKS4-1032-130<br>or ALS4-1032-130 | INSERT            |
| 46  | AN3-4A  | BOLT              |
| 46  | AN960JD10L  | WASHER            |

# 00.08.28  
UP 00.08.28

EFFECTIVE  
DEOS  
98/12/14  
DEO 9124  
DEO 9183

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) LENGTH OF D2500-1 EXTRUSION BEFORE BENDING = 190 INCHES \*
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (44 PLACES) AFTER FINISH. INSTALL AN3-4A BOLTS AND AN960JD10L WASHERS WITH SIKAFLEX-241.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
NOT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 29473A

Diagram of a circular cross-section of a pipe with four vertical stiffeners. The stiffeners are spaced 3.500 units apart. The distance from the centerline to the outer edge of the stiffeners is 1.750 units.

GRIND FLUSH (4 PLACES)

GRIND FLUSH

GRIND FLUSH

LOCATION RIDGE ON UNDERSIDE OF D2576

1/4"

Technical drawing of a bolted joint assembly. The drawing shows a cross-section of a bolted joint. The components and dimensions are labeled as follows:

- DRILL PRIOR TO D2575 CAP INSTALLATION (2 PLACES)**: Points to the two drill holes in the upper plate.
- #0.20B**: Points to the diameter of the bolt.
- SEAL WITH SIKAFLEX-241**: Points to the sealant applied to the joint.
- AN3-4A BOLT (1)**: Points to the bolt.
- AN960JD10L WASHER (1)**: Points to the washer.
- (2 PLACES)**: Points to the two locations where the washer is used.
- D2575 CAP**: Points to the cap.
- 0.40**: Points to the thickness of the upper plate.

The drawing includes a circular view of the joint and a detailed view of the bolted joint. The bolted joint is shown in a cross-section, with the bolt passing through the upper plate and the washer. The cap is shown in a cross-section, with the cap screw passing through the cap and the washer. The sealant is applied to the joint between the cap and the upper plate.

02579 SPACER

WEB (REF)

-130 (REF)  
4 PLACES

AFTER PERFORM

1. CHA
2. INS
3. WE
4. C'B

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

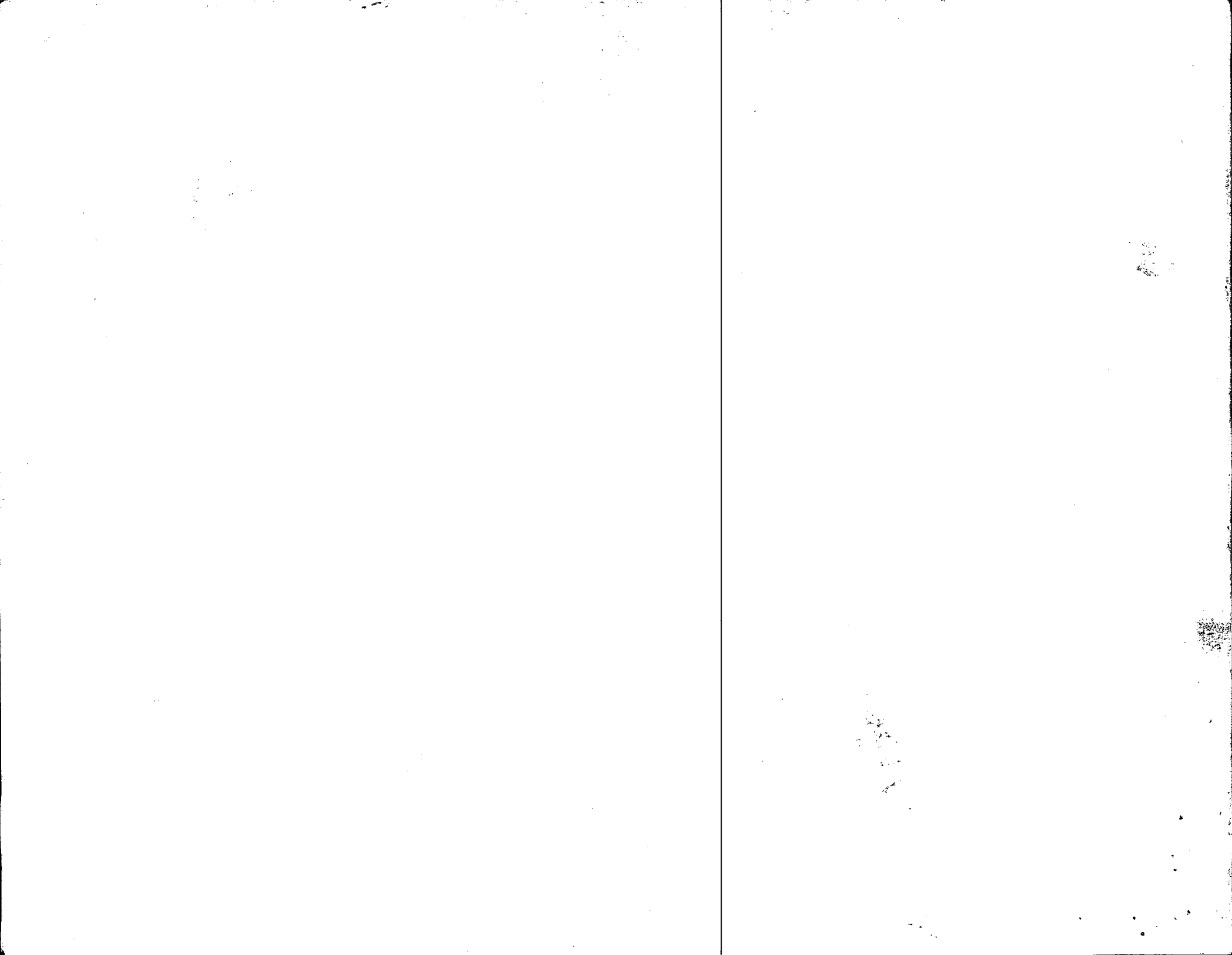
Elevation view of the bridge deck showing reinforcement details. The diagram includes dimensions for the distance to the aft end of the D2596 web (37.50), the number of bars (3 and 7), and various spacing dimensions (1.750, 8.750, 17.375, 26.000, 34.188, 57.313 REF, 7 EQUAL SPACES, 8.188 PITCH). It also indicates the number of typical places for #0.508 reinforcement (40 PLACES) and references to Detail A.

This technical drawing illustrates the bottom edge assembly of a vehicle floor plate. The main view shows a cross-section of the floor plate with various dimensions and labels. Key features include:

- Dimensions:** A total width of 0.5 is indicated at the left end. Spacing dimensions of 1.5 are shown between vertical lines representing rivets or bolts.
- Labels:**
  - "BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE" points to a textured area on the floor plate.
  - "WELD AS PER DETAIL B" points to a weld joint at the right end.
  - "BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE" points to another textured area near the weld.
- Detail C:** A circular callout labeled "REFER TO DETAIL C" provides a magnified view of the corner where the floor plate meets the side rail. This detail shows the installation of AN3-44 bolts and AN960JD10L washers.
- Part Numbers:** D2577-3, D2577-5, and D2577-1 are labeled as specific components or materials used in the assembly.
- Quantity:** A triangle containing the number "8" indicates that there are 8 of a certain component (likely the bolts/washers) per foot or section.

RELEASE  
98/09/17 DS

|                               |                                |  |               |
|-------------------------------|--------------------------------|--|---------------|
| DESIGN<br><i>[Signature]</i>  | DRAWN BY<br><i>[Signature]</i> | <b>DART</b> DART AEROSPACE LTD<br>HAMPSHIRE, ONTARIO, CANADA | REV. C        |
| CHECKED<br><i>[Signature]</i> | APPROVED<br><i>[Signature]</i> | DRAWING NO.<br>D2580   | SHEET 2 OF 2  |
| DATE<br>98.08.26              |                                | TITLE<br>205 SKIDTUBE ASSEMBLY                               | SCALE<br>1:24 |



NO. 80

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name Barclay Elliott  
Joint Welding Procedure Tig  
Part number and Job number A205 634 041 / B29469 A

TEST WELDS REQUIRED

BASE METAL Alum WELDING PROCESS Tig  
Penetration Complete ☐ Partial ☒ Single Weld ☒ Double Weld ☐  
Current AC ☒ DC ☐ Backing YES ☐ NO ☒

|              | Position                    | Vertical Down <input type="checkbox"/> | Up <input type="checkbox"/> |                             |
|--------------|-----------------------------|--|-----------------------------|-----------------------------|
| Sheet Groove | 1G <input type="checkbox"/> | 2G <input type="checkbox"/>            | 3G <input type="checkbox"/> | 4G <input type="checkbox"/> |
| Tube Groove  | 1G <input type="checkbox"/> | 2G <input type="checkbox"/>            | 5G <input type="checkbox"/> | 6G <input type="checkbox"/> |
| Sheet Fillet | 1F <input type="checkbox"/> | 2F <input type="checkbox"/>            | 3F <input type="checkbox"/> | 4F <input type="checkbox"/> |
| Tube Fillet  | 1F <input type="checkbox"/> | 2F <input type="checkbox"/>            | 4F <input type="checkbox"/> | 5F <input type="checkbox"/> |

Crossbolt Spacer Welded into Skidtube

TEST RESULTS

Visual Pass ☒ Fail ☐  
Penetration Pass ☒ Fail ☐  
Crossbolt Spacer Pass ☒ Fail ☐

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Date of Test Coupon 06/11/29 Qualifier David [Signature]